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FRIDAY, MARCH 8, 1895.

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CURRENT NOTES ON ANTHROPOLOGY (IV.)

THE SIGNIFICANCE OF VARIATIONS IN THE HUMAN SKELETON.

IT is a little odd that two papers on the same subject, with almost the same title, prepared independently at the same time, should agree in defending a new view of the significance of variations and anomalies in organic forms.

The one of these is that which I read before the American Association for the Advancement of Science in August last, published in the American Anthropologist for October, entitled *Variations of the Human Skeleton and their Causes*; the other was the Shattuck Lecture, delivered before the Massachusetts Medical Society by Dr. Thomas Dwight, Professor of Anatomy at Harvard University, with the title, *the Range and Significance of Variation in the Human Skeleton*.

The two papers, although drawing their material from wholly independent sources, and reasoning along different lines, reach quite the same conclusion, to wit: That variations, which in the human skeleton resemble forms in lower animals, are not to be interpreted as 'reversions' or 'atavistic retrogressions,' but that other laws should be invoked to account for them, such as nutrition, mechanical action, etc.

Dr. Dwight adds the following significant words: "The opinion is growing daily stronger among serious scholars that if man's body came from a lower form it was not by a long process of minute modifications, but by some sudden, or comparatively sudden transition."

This is the opinion which, under the name *heterogenesis*, I have defended for many years (see my *Races and Peoples*, pp. 80, 81). It has lately received strong support from some of Bateson's admirable studies in variation.

THE ANTIQUITY OF MESOPOTAMIAN CULTURE.

At a recent meeting of the Oriental Club of Philadelphia, Dr. J. P. Peters, whose researches among the ruins of the valley of the Euphrates are well known, mentioned his observations on the deposition of alluvium by the river as a chronometer for measuring the antiquity of some ruin-mounds. The deposits from the known date of Alexander's conquests display marked uniformity; and taking the depths of these as a standard, the foundations of Ur (the 'Ur of the Chaldees' of Genesis, the modern Muchair) and of Eri-chu (the modern Abu-Shahrein) must have been laid about seven thousand years B. C.

This venerable antiquity, however, appears quite modern compared to that assigned the same culture in some calculations laid before the Académie des Inscriptions by M. Oppert last summer. They had reference to the established beginnings of the Sothic cycle and the Chaldean Saros, or recurrent cycles of eclipses. His argument was that the former dated from an observation of the cosmical rising of Sirius visible to the naked eye. This could occur only at an eclipse of the sun at its rising; and this he figured was upon a Thursday, August 29, in the year 11,542 before Christ! And as it was visible only south of latitude 26°, the locality of the observation he fixes for various reasons at the island of Tylos, the modern Bahrein, in the Persian Gulf. Truly, this is a *tour de maître* in archaeology which makes one dizzy!

DIVISIONS OF THE STONE AGE.

A USEFUL broadside, about twenty inches square, presenting succinctly the subdivisions of the Stone Age, was published last year by M. Philippe Salmon in the *Bulletin de la Société Dauphinoise d' Archéologie et d' Ethnologie*. The three periods it presents are the palæolithic, the mesolithic and the neolithic. These are subdivided into epochs, six in all, each characterized by the products

of definite stations, peculiar industries, climate and fauna. As a synopsis of the accepted data, from the best French authorities, the scheme merits high praise.

The position of the mesolithic division takes the place of the 'hiatus,' which figures in the works of Mortillet and others as an unexplained time of transition between the rough and polished stone ages. Salmon, however, claims that no such gap exists. He quotes, for instance, the station of Campigny, near the lower Seine, and Spiennes, in Belgium, as proofs that the peoples and the culture of the earlier and ruder epochs progressed steadily, without important breaks, up to the full bloom of the neolithic generations. The importance of such a generalization, if it could be established, would be great; for, working back from historic to pre-historic times, there is no doubt but that the neolithic nations of central and western Europe were of Aryan speech, and Salmon's argument would carry this mighty stock in lineal line to the pre-glacial fishermen in the valley of the Somme.

THE TEACHING OF ANTHROPOLOGY.

IN a little pamphlet which I published in 1892, entitled 'Anthropology as a Science and as a Branch of University Education,' a plan was suggested by which this science could be introduced into our universities as one of the optional branches for the doctorate of philosophy, and its importance as a department of the higher education was emphasized.

The subject has been taken up lately in Germany with gratifying interest. In the 'Globus' for October, 1894, Professor Friedrich Müller, of Vienna, warmly advocates that a chair representing anthropology should be recognized as a proper addition to the faculty of a great university; and a few weeks later, in the same journal, the question was discussed by Dr. Rudolf Martin, of the University of Zurich. The

latter agrees that anthropology properly takes its place in the faculty of philosophy; but his division of the science is open to doubt. He would class all its branches under two groups: those relating to, 1. physical anthropology; and, 2. psychical anthropology, or 'ethnology.' Under the latter, he includes pre-historic archaeology; and not seeing very clearly where in such a scheme ethnography would come in, he takes the short cut of leaving it out altogether! This is a serious omission, as in many respects descriptive racial and tribal anthropology alone offers the indispensable raw material on which to build up a true science of man. His opinion, that at least two instructors, one for the physical and one for the psychical side, are desirable, will, of course, commend itself; but each should at the same time be well versed in the side which he does *not* teach.

GUATEMALAN ANTIQUITIES.

UNDER the sensational title 'An American Herculaneum,' a writer, M. X. West, in '*La Nature*,' November 3, describes the site of an ancient city, three kilometers from Santiago Amatitlan, Guatemala. His story is that at a depth of five or six meters, under a mass of volcanic cinders and tufa thrown out by some sudden eruption, there have recently been discovered the remains of a village with all the appurtenances of its daily life, finely decorated pottery, stone implements and images, the foundations of its buildings, and blocks bearing inscriptions in unknown characters. More astonishing is the statement that along with these were cups of graceful shape of glass, sometimes colored. This casts serious doubt on the whole narrative, unless 'volcanic glass,' *i. e.*, obsidian, is intended, as nowhere on the American continent had glass-making been discovered by the natives; and, indeed, it is very doubtful if at any point they had reached the art of glazing pottery.

At the Madrid Exposition, in 1892, the Lake of Amatitlan figured as the locality where an extraordinary seal, Egyptian in appearance, and some other probable frauds were found. No doubt it was the center of a high native culture, that of the Zutuhils, a Mayan tribe; and there seems to be also some modern adepts at present in the vicinity, whose skill should admonish the collector to be wary in investing in articles of that provenance.

AN EXCELLENT INTRODUCTION TO ANTHROPO-GEOGRAPHY.

THE various relations which his geographical surroundings bear to man in his personal, social and national life constitute the almost new science of 'anthropo-geography,' to which Professor Ratzel, of Leipzig, has lately contributed a standard work. In this country it has received little attention from educators since the time of Professor Guyot, whose '*Earth and Man*' was creditable for its period. The more modern opinions and results have been admirably summed up in a little volume written by Professor Spencer Trotter, of Swarthmore College, under the title '*Lessons in the New Geography*' (Boston, D. C. Heath and Co., 1895). In the compass of 182 pages the author presents, in succinct language, suitable to the student and the general reader, the relations which have existed between the distribution of land and water, the climates of the various zones and the plants and animals which they produce, to the life and development of the human species. He then proceeds to define the recognized types or races of men, and to point out their distribution when they first became known. The book closes with observations on commerce and the progress of discovery, and various tables of statistical information.

Whether as a text-book in schools and colleges, or as a trustworthy and lucid exposi-

tion of the subject for general reading, this volume merits cordial commendation, and should awaken a wider interest in the attractive topics which it discusses.

THE OROTCHI TARTARS.

AN entertaining description of this tribe is given from Russian sources in the 'Journal of the China Branch of the Royal Asiatic Society,' Vol. XXVI. (Shanghai, 1894). It is a member of the Tungusic stock, and is situate along the eastern coast of the continent, from 42° to 52° ; but the pure types are found only toward the northern limit. They are small in stature, a man five feet four inches in height being considered tall. The women average six inches shorter than the men. Their bodies are thick set and muscular, and their power of endurance remarkable. Like all the other pure blood tribes in Eastern Siberia, they are steadily diminishing, either through intermixture of blood or through new diseases introduced by foreigners.

Their boats are rude, but they manage them skillfully, which is the more necessary, as none of them knows how to swim, and when a craft capsizes its occupants infallibly drown. This ignorance is owing to two causes: the coldness of the water at most seasons, and their invincible repugnance to cleanliness. They are adepts in making garments of the bowels and skins of fishes, from which they are sometimes called 'the fish-skin Tartars.' They are also handy with tools.

Their religion is ostensibly that of the orthodox Greek Church; but really their ancestral Shamanism is as strong as ever. The residences of the Shamans are denoted by sticks or poles planted in front of them, carved to resemble animals, like the Totem poles of the north-west coast. Their chief divinities make a triad, being Boa Anduri, 'spirit of the sky'; Temu Anduri, 'spirit of the sea,' and Kamtchanga Anduri, 'spirit

of the mountains.' They indulge in violent religious frenzies, in which they speak in unknown tongues. One woman was unable to talk in her own for two months after such a spell.

THE FUTURE OF THE COLORED RACE IN THE UNITED STATES.

THIS momentous question has been made the subject of careful investigation by a physician of Savannah, Dr. Eugene R. Corson. His essay is published in the 'Wilder Quarter-Century Book,' a well deserved memento issued by the pupils of Dr. Burt C. Wilder, of Cornell University, at the expiration of his first quarter century of teaching.

Dr. Corson regards the relative mortality of the two races, white and colored, in the United States as 'the pith of the whole matter'; and, therefore, addresses his special attention to this. From his own observations and the census statistics, he concludes that the pure blacks have in our country a decidedly higher mortality than the whites; more die in childbirth, they are more susceptible to disease, they succumb more quickly, they are prone to bacillary diseases in a higher degree, and their alleged exemption from malaria is not generally true. The hybrids between the two races he pronounces less fertile and less viable than either. "Miscegenation is a reducing agent, chemically speaking."

From these considerations, which he advances, backed by large testimony, he reaches the comforting conclusion that there will be no 'war of races' among us; that the blacks will gradually fade out or become absorbed in the white population; and this in such a manner as not to deteriorate it.

THE PRE-HISTORIC TRIBES OF THE EASTERN UNITED STATES.

IN THE *Archiv für Anthropolgie*, for November, 1894, Dr. Emil Schmidt undertakes to gather together the fragmentary facts which

cast light on the population of the Mississippi Valley and Atlantic slope of the United States at a date anterior to that of the tribes found there resident by the first explorers. He presents the question temperately and free from the fantastic notions which one generally anticipates in this investigation. His results may be briefly stated.

Beginning with the 'mound builders,' he points out numerous reasons for considering them the immediate ancestors of the present Indians; going further into their identification, he decides that the ancestors of the Cherokees were the mound builders of the Ohio Valley. The original seat of the Huron-Iroquois family he locates north of the Great Lakes, and that of the Algonquian family somewhere to the south of Hudson's Bay, where the Crees are still found speaking a pure and ancient dialect. These two mighty stocks moved slowly southward, driving the mound builders from the Ohio, and penetrating into Virginia. There they met the Dakotas, whom they destroyed, except the small tribes of the Tuteloes and Catawbas. The Gulf States were peopled by the Muskoghean tribes from the south-west. The debated question whether there was a 'rough stone' or palaeolithic age in the United States, he answers, from the evidence before him, in the negative.

GALTON'S METHOD OF ISOGENS.

MR. GALTON is fertile in the application of new methods to anthropologic data. In a recent article in the *Journal of Statistics* he applies the method in use among meteorologists to define lines of equal barometric pressure, to data of natality. His so-called 'isogens' are analogous to the *isobars* of the weather maps. They are lines of equal birth-rate forming a constant derived from the two variables, the age of the father and that of the mother.

By this ingenious and simple process he reaches some curious results. One is the unexpected law of natality, "That the sums of the ages of the parents are constant; in other words, that the birth-rate is determined by the joint ages of the father and mother. The difference between the ages of the two parents is of no account whatever in nine-tenths of the total number of marriages." Only in the obvious case where the wife is older than the husband and is approaching the limit of the child-bearing age, is this law at fault. Another odd fact developed by this method is that a woman approaching somewhat closely the limit of the child-bearing age, say about thirty-five or thirty-eight, is more fertile with a man of her own age than with one who is younger; though it is admitted certain social reasons may help to this result.

Like all of Mr. Galton's articles, this one will be found admirably presented and well worth study.

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CURRENT NOTES ON PHYSIOGRAPHY (II.).

SIXTH INTERNATIONAL GEOGRAPHICAL CONGRESS.

THE Sixth International Geographical Congress is to be held in London from July 26th to August 3d, 1895, under the auspices of the Royal Geographical Society. An invitation circular has lately been issued, stating the general plan of the Congress, the conditions under which tickets of membership can be obtained, the program of subjects for discussion, and a most comprehensive list of honorary officers, honorary general committeemen, and committees in charge of various divisions of the subject proposed for discussion. An extended exhibit of geographical materials will be held in connection with the Congress, which altogether promises to be a most attractive reunion. The invitation circular can be